

**PIEZOELECTRIC RESONATOR APPARATUS WITH ACOUSTIC REFLECTOR****ABSTRACT**

5 A resonator apparatus has a piezoelectric resonator as well as  
an acoustic reflector which has a layer having a high acoustic  
impedance and a layer having a low acoustic impedance. The  
thickness of one layer is set different from a quarter of the  
wavelength in this layer at the operating frequency due to  
10 technological limitations in the manufacturing of this layer,  
and the thickness of the other layer is set dependent from the  
one layer, such that a predetermined minimum quality of the  
acoustic reflector is attained.